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ABSTRACT

This qualitative study of a high school using intensive education shows how teaching and learning were improved when teachers taught and students attended one class daily for 6 weeks. Intensive education is an alternative scheduling and organizational format that reduces class size and extends class length by having teachers and students in one class all morning studying one subject for 30 days. Afternoons can be devoted to art, music, and physical education. The study took place at the Brass Apple Military Academy, a private school for boys, operating in the Southeastern United States and using intensive education for over 30 years. Data were collected during an extended site-visit through teacher and administrator interviews; observation; and document and artifact analysis. The study found that under intensive education at the Brass Apple there were more opportunities for student-teacher interaction which enhanced teacher-student relations and student success in the classroom and promoted teacher satisfaction. The format also allowed teachers to have a deeper influence on students, and students to have more chance for individual expression resulting in positive emotional involvement and development. Teachers' collegial and collaborative interaction was less clearly structured, though individual teacher did have opportunities for continuing education outside Brass Apple. Question formats and a figure, "Work Place" are included. (Contains 32 references.) (JB)

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Intensive Education:

How it affects teachers' and students' work conditions

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Intensive Education:

How it affects teachers' and students' work conditions

This qualitative study of a high school using intensive education shows how teaching and learning are improved when teachers teach and students attend one class daily for six weeks. Under this schedule there are more opportunities for student-teacher interaction, tailored instruction, student expression and involvement, and teacher collaboration and development.

Ideally the school is an organization that is structured in such a way that it will optimize the teaching and learning process since the work of the school is teaching and learning. Reports on the public high schools in the U.S. today such as Theodore Sizer's (1984) Horace's Compromise, indicate that the current structure of high schools hinders learning. They show that learning is fragmented, time is wasted, and teachers have too many students to be able to get to know any of them well. Teachers are forced to make compromises in teaching because of limited time and large numbers of students.

Philip Cusick (1973) in Inside High School: The Students' World , illustrates how that as a result of the traditional schedule and large classes students spend the majority of their time in school waiting and on school maintenance functions rather than learning. He shows how the meaningful interactions provided for by the structure of the school are student-student interactions rather than teacher-student interactions. Teachers spend much of the class time taking roll, giving directions and giving out information rather than interacting meaningfully with students.

The solution

The Copernican Plan by Joseph Carroll (1989) offers an alternative way to schedule a public high school that would reduce class size and extend class length, and the average teacher's daily student load to 20-30 from 150-200 at no cost to the school. The scheduling change would change the teaching and learning process by having teachers and students in one class from 8-12 A.M. (4 hours) for a period of 30 days and then in another class the following

30 days. There would be 6 of these 30-day sessions per year and students would take art, music, and physical education in the afternoons. This type of scheduling creates "intensive education" which is also sometimes called the single subject study plan or macro-scheduling.

Changing a traditional school schedule to an intensive education schedule is a restructuring reform that affects teaching and learning and the conditions of teachers' work in schools. Teachers will spend their time with a smaller number of students and concentrate on one subject without distractions from a variety of other factors that are a result of the traditional way classes are scheduled in a traditionally organized school. The current school year is at least 180 days long, therefore teachers would teach, and students would enroll in, six morning classes each year (6 classes X 30 days = 180 days). Using this schedule, the students would take one more academic class than in the traditional schedule, and the teachers would also teach an additional class. To illustrate this further, in a traditional six period a day schedule students generally take four or five academic classes and a physical education class. Teachers generally teach five of the six periods in a traditional schedule with the extra period used for teacher preparation time. The intensive education schedule allows for an extra academic class for both teachers and students. Overall, class sizes can be lowered almost 20% assuming current staff and student enrollment are kept at existing levels. This is a result of the fact that no teachers are taking the traditional preparation period in the morning when the academic classes are being taught. The student body is divided among the total number of teachers who teach the academic subjects.

Assumptions

Proponents of intensive education assume the following relationships between variables.

1. Intensive education affects the following resources which alter the basic conditions of education: it reduces class size, lengthens class periods, and reduces the number of subjects that students take and teachers teach each day.

2. These changes in conditions can facilitate the development of changes in the following processes: A) Increased interactions between students and teachers. Teachers, through increased interactions, can focus on the needs and interests of the students and can provide students with immediate feedback on class assignments because there are a limited number of assignments to grade. Increased interactions help students understand that teachers care about them. These increased interactions allow teachers to help students who need special help. B) More teaching methods and learning activities, C) Deeper student and teacher involvement with the subject matter, D) More opportunities for teacher development and professionalism, and E) Increased interactions between students which foster greater liking and empathy toward one another and skills in working together.

3. These processes made possible by the conditions created by the intensive education provide opportunities for increases in the following areas: academic achievement, better relationships between teachers and students, more positive relationships between students, increased attendance and fewer dropouts, fewer suspensions and academic warnings, and higher graduation rates, greater teacher satisfaction, greater student satisfaction and enjoyment of learning and students gain better self-concepts.

Summary of a Review of Literature on Intensive Education

The first assumption, that intensive education lowers class size, lengthens class time, and allows students to concentrate on one subject seems well supported in the literature for a variety of learning situations. The literature of intensive education in private high schools

(Maul, 1978; Powell, 1976), public summer school programs (Carroll,1989), macro block-scheduling in public high schools (Canady, 1989 & 1984; Carroll, 1989; Munroe,1989; Powell, 1976; Steagall, 1968; Whitla, 1992) and intensive education in colleges (Baylis, 1983; Bevan, 1973; Brown, 1940; Christy, 1993; Deveny, 1976; Hefferlin, 1972; Heist, 1979; Kuhns, 1974; Mims, 1980; Wallace, 1972; Wishard, 1971) strongly supports the assumption of greater interactions between teachers and students, though the increased interaction among the students themselves is not so strongly supported. Observations and surveys have also documented an increased use of a variety of teaching methods and learning activities in all the reviewed situations, students, teachers, and administrators in the reviewed programs cite appreciation for the opportunity created by the schedule to concentrate in depth on the subject matter (Brown, 1940; Powell, 1976; Whitla, 1992; Steagall, 1968; Munroe, 1989; Whishard, 1971; Bevan, 1973; Mims, 1980). The assumption that intensive education creates conditions which provide more opportunities for teacher development and professionalism is less well documented in the literature (Powell, 1976; Brown, 1940). The overall agreement in the literature is that achievement is at least equal, if not better, than achievement in a normal schedule (Powell, 1976; Munroe, 1989; Baylis,1983; Carroll, 1989; Wallace, 1972; Whitla, 1992; Deveny, 1976). Students and teachers in the studies maintain that the students learn more, but written tests sometimes only show equal achievement. When achievement is based on GPA, most of the literature shows increases in achievement. Studies of intensively scheduled summer programs at public high schools document increased achievement on test scores, as well as do the macro block-scheduling studies of public high schools. The literature is quite strong in the area of increased graduation rates and attendance (Heist, 1979; Wishard, 1971; Bevan, 1973; Baylis, 1983; Kuhns, 1974; Munroe, 1989). The literature reviewed also supports the statement that academic warnings and suspensions decrease.

Teachers' and students' work conditions and how they are affected by intensive education

In their article in the Encyclopedia of Educational Research, Bacharach and Mitchell (1992) discuss the concept of the school as a workplace. They claim that a good teaching environment consists of work context conditions that are prerequisite to teachers being able to teach effectively. These are adequate physical conditions, resources, and effective relationships with other members of the school environment.

Work PLACE Conditions Of Teachers And Students

Bacharach and Mitchell's (1992) physical conditions that affect teachers' ability to perform their jobs are: 1) facility (i.e. recent renovations, practical, solid construction), 2) space (i.e. not too crowded, amount and flexibility of the area, storage space, enough classrooms, faculty space), 3) maintenance (i.e. cleanliness, few repair problems, cleaning supplies, pride in building), and 4) safety (i.e. not unsafe neighborhood, no vandalism, security, open access to the building). Susan Moore Johnson (1990), in Teachers at Work, gives the following similar list of physical needs in a teachers' workplace: safety, comfort, space, and resources.

Bacharach and Mitchell's (1992) three categories of resources are: time, support staff, and equipment, materials and supplies. Teachers need to be given enough time to complete the tasks associated with the job. Teachers need time for planning, to experiment with new teaching techniques, for developmental activities and they need small class sizes in order to interact with students. Susan Rosenholtz (1989), in her book, Teachers' Workplace:The Social Organization of Schools , voiced a similar concern: teachers need conditions that allow them to use nonroutine teaching methods. Susan Moore Johnson (1990) also found that teachers need a smaller workload. Speaking of large class sizes and what he calls batch processing, Raymond Callahan (1962) in his book Education and the Cult of Efficiency, reports that school officials

did not succeed in making schools more productive and that they achieved economy by only the appearance of efficiency. Large class sizes and batch processing reduced costs and enabled school administrators to look responsible in the eyes of the business community but they failed to better educate children. Susan Moore Johnson also expresses her concern about this: "The rhetoric of educational mass production is no longer heard, but its structures endure. Bureaucratic forms in education are resilient because they keep costs down and permit schools to cope with large numbers of students in a seemingly orderly way. They do not, however, meet the needs of teachers and students who are engaged in the business of teaching and learning rather than management and accounting." (p.107)

The WORK of teachers and students

The former discussion has been at the macro-level of looking at the teachers and students work place. Micro-level views of the teaching-learning process address the actual work of the teachers and students. Concerning student teacher relationships, Bacharach and Mitchell say the centrality of student interaction is one of the consistent findings on teachers' work role. A teacher's sense of confidence and efficacy depends on their ability to help students learn.

Homans' (1974) ideas about group relationships are useful to judge whether schools are structured for optimum student-teacher relationships. He identified three ways to analyze relationships within groups: activities, interaction, and sentiments. Activities pertain to what people do in a given situation. Interaction denotes the process in which one unit of activity stimulates a unit of activity in another person. Finally, sentiments refer to internal psychological states of people engaged in activities and interaction. These events are interrelated and a change in one usually leads to a change in another. For example; (1) If the frequency of interaction between 2 or more persons increases, the degree of liking for one another will increase, and vice

versa, (2) Persons whose sentiments of liking for one another increase will express these sentiments in increased activity, and vice versa., (3) The more frequently persons interact with one another, the more alike their activities and their sentiments tend to become, and vice versa. This would suggest that increased student-teacher interaction will lead to an increased cooperation, effort on assignments and teaching, and more agreement within classrooms. Another of Homans' ideas explains the amount of effort a person is willing to put forth to achieve something. His equation is as follows; action = value X probability of success. Whether a person is motivated to learn something will depend upon how highly he values it and whether or not he thinks he is capable of attaining it. The longer periods and smaller number of students in the intensive schedule allows teachers to help individual students which raises their probability of success.

The necessity of the quantity and quality of interactions was also made clear in Conley and Cooper's (1991) book in a chapter written by William Firestone of Rutgers University who discussed the specific needs in the interaction between students and teachers. He said teachers need a smaller student load because-"long-term coassociation of students and teachers, increases the likelihood that the role distance, alienation, and antagonism that now often characterize teacher-student relationships would be reduced. As students and teachers interact in a variety of situations, there is a greater probability that mutual understanding and respect will grow."(p.163) He claims successful programs provide greater opportunity for interaction between adults and students because these programs "take care of their own", and the multiperiod schedules and bells are absent.

Interaction, activities, and sentiments are also the concerns of Dreeben (1970) when he discusses the unpredictability of teaching technology, and the problem of treating students

individually and equitably. Quoting Cogan (1953) whose studies showed that where pupils see their teachers as warm and friendly, they complete more required and self-initiated work than where they see their teachers as less warm and friendly. "Teachers must create a sense of goodwill among pupils, a sense of diffuse attachment to the teacher, the classroom, and the school. In other words, a teacher must create a feeling that the school is a desirable place to be and that school work is worth doing." (p. 98) John Dewey (1938) said that schools should be organized so that the education it provides relates to the personal experience of the students, enters into their personal life, and helps shape their judgment. He argued that the desirable educator is one who seeks to unify both the mind and the body of the student, or thinking and doing.

To sum up, the elements of the work "place" might be considered to be Bacharach and Mitchell's (1992) physical conditions, resources, and relationships between the teachers themselves and teachers and administrators. The elements of the "work" of the school on the other hand are the resource of time and the relationships between students and teachers and between the students themselves. (see figure 1)

Let's examine a school that is using intensive education:

The Brass Apple Military Academy

I will now examine if Brass Apple Military Academy's physical conditions, resources, and relationships are conducive to good teaching and learning. After this I will take a micro perspective look at the process of teaching and learning itself using the data to show the interactions, activities, and sentiments of the teachers as they relate to the students in the classrooms. Does the single study subject plan (intensive education) create conditions which increase the effectiveness of the "work" of the school?

Methodology

The purpose of this study was to investigate teaching and learning in a school that used the intensive education approach. After searching unsuccessfully for a public school using this approach in the U.S. or in western Canada, I managed to locate the Brass Apple Military Academy which had been using intensive education for over 30 years. After obtaining permission from the administrators to study the school, I traveled to the east, equipped with pads of paper, a camera, and a tape recorder. Data were collected through interview, observation, and document and artifact analysis.

A total of five interviews were conducted. Three teachers were interviewed, two of these interviews were taped and transcribed. General questions were developed and new questions added as I observed the school and the classes. A sample of these questions is found in Appendix A. The remaining two interviews were with administrators; one was in charge of running the school and the other was his assistant. Both were former teachers who had taught under the one subject plan for over 20 years.

Five students were given questionnaires. These students represented high, medium, and low level academic achievers. I asked for this combination to be sure to get a broad based point of view. Students responded to six questions, which can be found in Appendix A. In addition to these interviews and questionnaires I observed and took notes on 10 hours of class (5 hours of government, 3 hours of English and 2 hours of algebra). Detailed notes, recording interactions, discussions, subject matter, activities, and classroom descriptions were taken. One hour of class time was tape recorded and transcribed, consisting of ½ hour in English and ½ hour in government.

Two separate tours provided an extensive view of the school, grounds, and classes. One of the tours was given in the morning by a teacher. During this tour we were able to observe many classes in session and I was able to observe whether the students looked as if they were actively engaged in learning. The teachers that I observed for several hours and interviewed were chosen for me by administrators so it can be assumed that I have observed the finest the school has to offer, as opposed to a more representative sample. This tour of peaking into doorways gave me the opportunity to balance my observations, for I noted a classroom in which some students had their heads down, reminding me that this school was susceptible to the same motivational and teaching strategy problems as any other. The second tour was conducted by one of the administrators after classes were completed.

Finally, I supplemented my observations, interviews, and questionnaires with a video tape of the school and its program, pamphlets old and new of the school and its program, maps, pictures, admissions forms, time, class, and teacher schedules, and a brass apple given to me by the government teacher I observed. He had just finished polishing it when I came in to collect the student questionnaires and was on to polishing his fine brass bullet collection that was lined up sparkling in his office.

Presentation of data analysis

Description of the school-

The drive from the airport to the town the school was in (Brass Apple) was beautiful, the trees brightly colored in their autumn foliage and the grass bright green. I arrived early Sunday morning, after having flown on an all night flight from Los Angeles, so the roads were mostly empty and I was free to enjoy the landscape. I passed several small towns that were characterized by idyllic white farm houses, with well kept wide green lawns, and neatly kept red

brick town buildings complete with white French windows and doors. There were occasional concrete supermarkets and functional looking gas stations on the way but too few to disrupt the feeling of down-home nostalgia one feels when driving country roads.

The town of Brass Apple included the additional attraction of the Brass Apple Military Academy's beautiful red brick and majestic stone buildings and colorful landscaping. The Academy occupies 500 acres, 26 of which provide six athletic fields, a 85,000 foot fieldhouse which features an indoor track, another gym, an indoor swimming pool, and a 2500-seat stadium. The new state of the art library houses more than 18,000 volumes and the Chapel seats 550. Classes are held in three buildings, the newest being the science and math building with its planetarium. These buildings, surrounded by broad lawns and maple trees, are centered around the commons area which has a flag flying in the middle and the imposing administration building at one end. Most students are housed in red brick dormitories on campus, though a few come from surrounding areas and are able to go home at night. Teachers and administrators also live near, either on campus in well-kept apartments or white idyllic looking houses, or they live in houses in Brass Apple proper which they either own or are provided by the school. The school offers a free acre of school land, to teachers who want to build their own homes, with the only restriction that when the teacher wants to sell, the school has the first right to buy the house at the current market rate.

Brass Apple Academy was started by a Baptist minister in 1898 with an initial class of 19 students. In 1902 it began military instruction and in 1913 it changed its name to Brass Apple Military Academy. It continues to receive some support from the Baptist General Association of that Southeastern state and today it enrolls a total of 600 boarders and 18 day boys. This is broken out with the Junior School grades 6-8 and the Upper School with grades 9-

12 and a postgraduate year. The Upper School has approximately 32 teachers and 451 students. Average class size is 14 students. Teachers and students study/teach one subject for a period of seven weeks. This unique schedule has been in place for more than 40 years. Students, teachers, and administrators are not bashful about pointing out its benefits.

The typical teacher's day begins with class at 8:00 in the morning which goes until 10:15 at which time all students and teachers have a 45 minute break. During this break teachers relax and talk with one another in the teachers' lounges in their buildings, correct papers, or prepare for classes. Students do homework, go to the library, take a nap, or read. After this break all return to their same classes until lunch time when teachers and students go to the cafeteria for a hot, balanced meal. After the 45 minute lunch break classes resume at 1:15 and continue until 2:00 for all students. All students receiving a C or better may leave and the teachers stay and teach the students who are not doing well in class until 2:30. Teachers then coach or work on class preparation and grading. Remember, the typical class size is 14 students and the teacher has these same 14 students throughout the day and is teaching them a single subject.

The typical student's day begins with breakfast, and then a line up around the flag at 7:30. At 8:00 they begin classes and follow the above procedure until 2:00 or 2:30, followed by going to practice music, an intramural or team sport. At 6:00 they again line up and march around the flag, then eat dinner. From 7:45 to 9:45 they participate in a supervised study period. During this time no talking, eating, playing music, watching TV, and visiting other students' rooms is allowed. Prearranged peer tutoring is permitted during the first hour but during the second hour students are to study on their own. At 10:00 lights are out and the next day a new

day begins. Classes are regularly scheduled every other Saturday. Sundays and every other Saturday the students may do as they please.

The work Place itself

Physical Conditions

Teachers and students begin the day together in a classroom containing better than adequate facilities, space, maintenance and safety that positively affect teachers' ability to perform their jobs. At the Brass Apple Military Academy facilities are solidly constructed from brick and stone. Recent renovations include a new science and math building with the planetarium, a new state-of-the-art library, and a new indoor sports complex. Much of the money for these projects has been donated by alumni. Teachers were affected positively by the quality of the physical conditions at the school. There was a definite prestige associated with being able to teach in one of these new buildings as was reflected in several statements made by faculty members. Each academic building had at least one faculty room and all of the classrooms had a separate teachers' office with windows facing the classroom. Classroom space consisted of rooms quite large for the average class sizes of fourteen. The buildings and grounds were immaculate and safety was also not a problem. Teachers and administrators however, locked offices and classrooms when not in use although no problems were expressed in my collection of data other than the following somewhat humorous exchange between a teacher and a student about a missing candy bar: Teacher, "Someone owes me a candy bar." Student, "Mr.X, I didn't open your candy bar." Teacher, "You are witnessing academic suicide."

Resources

While physical conditions are important, so are the necessary resources to carry out assigned teaching and learning tasks. Bacharach and Mitchell's (1992) three categories of

resources necessary in education are time, support staff, and equipment, materials, and supplies. The resource "time" is very highly connected with the teachers' ability to do their work (teaching), therefore it is listed in the **Work** section of this paper.

Resources - materials, equipment, and support staff

The Brass Apple Military Academy seemed to have sufficient teaching and learning equipment. Classrooms were furnished with enough desks, texts, chalk, and so on. The English classroom, which was not atypical, had a set of World Book encyclopedias and three shelves of novels in the back of the room. In front was the television, radio and video machine, along with a table full of magazines. All students taking an English class were provided with a portable computer(printers were located in each of the dormitories). Under each student's desk was a large book called "Writer's Choice" and a large literature text. Each student also had a novel of his choice such as "Horse Hunters", "The Client", or "Animal Farm". The government and math classes also had plentiful supplies.

Teachers were provided with current magazines on teaching and subject matter and the administrator's office counter was piled high with new teaching information, one item on one stack was Bernice MacCarthy's 4-mat system of teaching. This is a system that incorporates many different activities into lessons in order to keep lessons interesting and to exercise each of the student's learning styles.

Because the classes were so small and teachers knew students well, not many support staff people were needed. Teachers had the time to work with the needs of the small number of students they were responsible for each day. The school did have several counselors, a Chaplin, an infirmary staff, library staff, a secretarial staff, and a maintenance staff. No one mentioned a need for more help in any area.

Summary of workPLACE physical conditions and resource data

The data collected about the physical conditions at the Brass Apple Military Academy indicate that the physical conditions are enhancing rather than hindering the teaching and learning process. Students, teachers, and administrators seem to appreciate the quality, beauty, practicality, cleanliness, and safety of these facilities. Resources were also plentiful, however the resource most mentioned and appreciated by the educators and students alike was the resource of time which will be discussed in the next section.

The WORK of the school

The resource of time:

Workers in an organization need to be given enough time to complete the tasks associated with their job. The element of time is critical to the job of teaching. Time is important for several reasons. Teachers need time for planning. Time is related to class size because it determines the time teachers have to respond to individual students. If the teacher has a large class load the teacher has limited time to learn the strengths, weaknesses, personalities, and needs of individual students. The length of classes contributes to teachers' opportunities to experiment with different teaching techniques, using methods and learning activities that cannot be used in short time periods like research, in-depth discussions, field trips, projects and others. Long classes enable students and teachers to become engaged in one particular subject matter instead of daily juggling with information of five different classes. Teachers can also take time to engage in developmental activities.When asked about the single subject study plan at the Brass Apple Military Academy educators and students responded positively. Teacher's reasons for liking the schedule were: (1) flexibility in teaching , (2) they were able to cover curriculum areas well, (3) establish relationships, (4) get to know individual students, and (5) have time for

professional improvement. Additionally, they attribute the school's success to the schedule. For example, Teacher "A" pointed out what the advantage of extended class time means to his lessons and interpersonal relations with students. Teacher "A" said, "Personally I really like it because I think it really lends itself to English very nicely. And I think, I honestly can't imagine teaching 45 minutes, I used to teach on a forty five minute schedule and I just can't imagine doing that any more. Because just by the time you get to something it's over. And there is so much flexibility with this, if you are doing something that doesn't work you can skip on to something else and come back to it..... overall it's like night and day I don't know how to describe it. You noticed that we started out watching the news. We had a fairly interesting and extensive current events discussion, in fact it probably took 45 minutes and in a traditional class you just would not have time to do that. We talked about the relationships and I think that the discussion period in the morning really establishes the relationship whereby the discussion of literature springs. Do you see what I mean? So without that, with the luxury of that time in the morning we can get to know one another and the things we do later on are much higher quality than if I just saw them 45 minutes and I just knew their names and they didn't know me."

Teacher "B" gave the following response to the researchers' question: "You were mentioning to me that small class size is a great benefit of this schedule, is that the only benefit?" "No, absolutely not, the fact that a boy is immersed in a subject and with one individual, there is none of this changing six or seven times a day trying to figure out six or seven people who are his bosses who each have two hundred students on their own. I can bond with these kids, I love them and they know I do, I won't take any garbage from them at the same time I know what they are capable of. I can show you quizzes right here where one boy can hardly write and then I have another kid like the Hungarian boy who is brilliant, maxes the SAT scores, I can hold them each accountable to their own standards."

Teachers had small loads of students, on the average of 14 students a day for a period of 7 weeks. They were able to plan for one subject and for these 14 students. This extended time permitted flexible schedules for teachers. Teachers had a limited amount of homework to grade each night and therefore had time for professional developmental activities (for example, taking university classes). Both the English teacher and the government teacher were taking a class at the university of the southeastern state which was 45 miles from Brass Apple. One was taking an Algebra class to "make him a better teacher by keeping him in a mental discipline", he also mentioned that he was being an example to students by showing that he was a life-long learner. The other teacher was taking a graduate English education class in which he was reading Friere and so on. The school paid for classes that the teachers took at the university, several classes a year for each teacher, and teachers had a workload that allowed time for taking these classes.

Administrators see the intensive education schedule as advantageous because it provides teachers with (1) sufficient time to present material well, (2) time to get to know the students, (3) class time isn't wasted with maintenance functions, or interrupted, (4) small classes, and small daily student loads, and (5) opportunities for teachers to improve and correct errors. An administrator expressed his sentiments about how the extended time of class periods reduces down time, means that everyone gets started one time a day, allows students to focus, and permits teachers to develop individually. "I like it, I taught it for 29 years. I could present a lot of material. You get to know the kid and you know his limitations. You also don't have the time wasted when the kids have to come in and get settled, not as much class change.....and you have to vary your activities because the concentration time of the students... Another benefit of the schedule is for new teachers, every seven weeks they can start over with a new class and change anything that they found did not work for the last class, instead of having to live with their mistakes throughout the year."

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Student's also felt they benefited from the single subject study plan. They felt (1) their grades improved, (2) they were able to concentrate on a subject, (3) they learned the subject in depth, (4) they were able to ask teachers many questions. Following are the students' written responses to the question "What do you think of the single subject study plan?" Student 1, "Under the one subject plan I've found that my grades have improved because all my attention is focused on a single subject. Even though an extensive amount of information is being presented the teachers are willing to go over and over any questions the student might have as long as they take the initiative." Student 2, "I feel that the one subject plan is a good idea, because it allows me to concentrate on that subject only. It has helped me out a lot since I have been here." Student 3, "I think that more schools should use the single subject plan. This plan helps you learn each subject area in more depth. In places where you go to six classes a day, you only skim the surface." When asked the question about whether or not they were bored in the one subject plan all five students said that they were very interested and that teachers made the subjects interesting.

Because of the intensive education schedule students had time to concentrate on one subject, to get help from their teachers, to complete their homework, and to interact often with their teachers in the classroom. Teachers had time to get to (1) know the special interests and needs of their students, (2) provide for extensive student-teacher interaction during class time, (3) had time to grade assignments promptly and plan lessons, and (4) to attend university classes in the evenings.

Relationships (Student-Teacher)

The core of the teaching and learning work is in the student-teacher relationships. The most impressive data collected in this study was about these student-teacher interactions. All the

educators and students interviewed at the Brass Apple Military Academy expressed an appreciation for the intensive education schedule because it provided conditions under which teachers and students could interact often. Teachers said they could teach better since they knew their students and students felt they could get the help they needed. The teachers' feelings of confidence in their teaching, their feelings of efficacy were clearly evident in statements such as the following, which was made in response to the question, "What are the strengths and weaknesses of the second student in the third row?"

Teacher A, "That will be Jim Johnson, the orientierer. I've had Jim a couple of times and this is neat because I've seen him move from a 14 year old to a 17 year old. In four years I've really seen him develop from a boy who could hardly write, well, you heard him ask me in class today if he could use the dictionary. He is using good sentence structure, he's writing, he's communicating. He has gone off and found one of these weird little sports, the orienteering and you heard him say today that he is one of the national champions. Now that's a kid who would have been a nothing in public schools, he would have been lost. Not because of any teacher's fault he just would have been lost in the numbers, he's shy. Here he's found a nitch, that kid's going to prosper and he's taking off now."

During the English and government classes I observed the average interactions between the teacher and each student were four each hour. This was a far higher number than the typical number of interactions between students and teachers in a typical public high school class of 40 students that lasts 50 minutes. The quality of these interactions was not superficial; some exchanges were intensely personal, many reflected high level thinking skills, and some reflected creativity.

Personal Interactions

Elaine Batcher (1981), in her book Emotion in the Classroom, illustrates the importance of establishing a sense of belonging in the classroom. She showed how students are much more concerned with the relationships they form with friends and the teacher than the work of the classroom. The experience of belonging is interpreted as being liked. "If one is liked, if one has friends, one belongs. Belonging is thus an emotional perception on which much depends." (p.161) She also shows how emotion is the meaning of an event to the participant, and teaching without using and exercising the students' emotions is generally meaningless. The students need to know what the knowledge means to them. Intensive education provides time for students and teachers to form this sense of belonging and close relationships. Some interactions between students and teachers are very personal, and sometimes ethics and manners were taught. This is an example of a teacher helping a student learn self control and discipline: Teacher, as a student started to talk without raising hand. "Excuse me Mr. X you've lost control of yourself."

or,

Here is an example of a teacher helping a student develop academic discipline: Teacher, to a student who had problems writing legibly, "Slow down, I'd rather you write four words that I can read neatly than a whole messy sentence." Student (speaking hopefully), "You want me to write four words?" Teacher, "No, but slow down, write neatly."

or,

Here is an example of the teacher's interest and guidance in the students' personal life. Teacher, "Did you go home this weekend? Did you spend time with your little brother?"

or,

Here is an example of a discussion that covers controversy, dilemmas, and placing value on certain things. Note the rational structure the teacher is trying to impose and how the students are trying to resolve the dilemmas posed when discussing this controversial cartoon. Student, "How can a cartoon be blamed for the problems in our society?" Teacher, "You are saying the written work doesn't influence people in the wrong direction?" Student , "Some programs have taken us down the wrong track." Teacher, "Yes,... social norms... What happens when everything is acceptable when there are no limits?" Student, "If the shows are so bad the parents shouldn't let kids watch it." Teacher, "I should not buy cable or liquor?"

Student, "Parents tell children not to watch but they watch it anyway. You should be brought up in a way so that you are not affected." Student, "You should regulate the TV viewing at home."

Teacher, "If I am mad about the cartoon it is because I can't control myself? Student, "People are using the show as a scapegoat." Teacher, "Maybe the show is treated as a symptom of what is going on in our society"....discussion of violence..."Has our society become more violent? Does it show up in our area?"

High level thinking skills

Some studies have shown that students need to express themselves in order to learn, they need to talk to learn. When students are forced to organize their thoughts into logical, coherent sentences it forces them to determine exactly what it is they do or do not understand, and it allows the teacher to determine whether or not students understand and are learning. Talking is an efficient way to learn- one needs to talk about the subject matter. Talking, again, forces one to think through the concepts in order to be able to explain them to others. Following are some examples of high level thinking skills/ learning. Here a student is asked to understand and explain a frequently used, though not often well understood phrase "minority leader". The

student begins to read a newspaper article in front of the class. Student, "Dole is a minority leader " Teacher, "Why are people listening to the minority leader?" Student, "The public does not like what the majority is doing so the press listens to the minority leader."

Another example shows the teacher teaching students to put things in their own words and formulate their own explanations. The student is in front of class reading a short current event article. Teacher, "The administration is what? Rephrase what the article said." Student, Briefly paraphrases the article. Teacher, "There is a power struggle between the President and Congress. We turned to the Constitution. What does it mean if a country is isolationist?" Student, "The country wants to keep to itself." Teacher, "Let's vote on it, do you think people are more interested in the problems at home, the fear of being defeated at home?" Half the students voted that Americans were most concerned about problems at home. "Read again." Student, Reads more from the article. Teacher, "What do you think of that? President Clinton's political price for foreign policy stumbles. What is happening to his power according to this article?"

Students are taught to take a position and defend it, to investigate a phenomena and compare it to something different. The teacher, describing the format of a class assignment, "Have you made a statement yet that you are looking to prove or disprove? A thesis - a country to compare? There are similarities and differences between the two."

Another discussion in English class represents high level subject matter. Students are asked to think about art and their own response to it. Teacher, "When you see art it teases another thought. That is why your learning does not stop after high school. Mona Lisa, Shakespeare—after we are dead and gone people still listen to American Pie, see the Mona Lisa. People die and art lives on. Truth is beauty. Do you need to know ugly?" Student, " The author

wanted you to look at beauty in things..." Teacher, -Explained how a farmer who needed water could see beauty in a thunderstorm, while a golfer wouldn't.

Many interactions related subject matter to the students' personal life. The teachers attempt to show students how they as persons respond uniquely, to let them know that they are expected to form their own opinions, and, finally, that this opinion is valued. This is illustrated when the English teacher asked, "If you had to sculpt a person you did not like, what would you make that person look like?" The history teacher related bureaucracy to the student's personal life in the following interaction, Student, "What is the clear division of labor?" Teacher, "Like a basketball team....." Later in the class he used the same technique when explaining the prevalence of rules in bureaucracies. Teacher, "There are 57,000 pages of US Government rules. Just look at the track here. There is a sign every six feet that says the same thing just in case you forget what the sign said six feet away." Student, "Doesn't that hurt the effect of the rules when you have too many and they are not enforced?" Teacher, "What do you think class?"

Creativity

Students at the Brass Apple were encouraged to produce their own products, and these were valued. These products were seen in the form of answers to questions, in which their opinions were expected to be seen or heard and defended, and in stories, poetry and so on. Creativity and thinking skills are reflected in the following discussion of a student's poem in English class. Teacher, "I like that, nature has its own litter. I hadn't thought about that before. It's good, good." Student, (reading a poem he had written), "...my trail has hills and mountains too....." Teacher, "Good, good, I like the part about stopping by a river to refresh yourself. What are some of your rivers in your life where you could refresh yourself?" Student, "Water." Teacher, "No, no I'm speaking much more figuratively." Student, "Oh." Teacher, "You know

when you get burned out, what do you need to refresh yourself?" Student, "Achieving goals." Teacher, "Achieving goals, O.K. good." Student, "Talking to inspirational people." Teacher, "All right, inspirational people.", Student, "Love of your family."

Students' sentiments toward teachers

In addition to the observed interactions between students and teachers, there was evidence that the students' sentiments were touched when they mentioned teachers being their best friends, that they understood teachers had their best interests at heart, that they were close (feelings of belonging, care and being personally valued) to their teachers, and that they experienced the good and the unpleasant together (camaraderie). The students responded positively on the questionnaire when answering the question "Are you close to your teachers?" Student 1 said, "In some instances your teachers become your best friends because they worry about you doing well and they try to lead you in the right direction, which I believe is due to the one subject plan." Other students also felt close because they spend all day with that one teacher, their classes are smaller, because they went through their trials and tribulations together, and because they consider teachers just another good friend with more experience.

The examples above are a representative sample of student-teacher interactions showing that students were interested and engaged in learning. In the intensively scheduled school, with its small long classes, students had many opportunities to communicate and teachers were able to make sure that all students participated. Classes were small and student-teacher interaction was frequent and interesting. The student-to-student interaction observed was in the form of student presentations, teacher led discussions, and peer tutoring. Practices of cooperative learning were not observed. Because of the small, long classes, teachers are able to develop and continue meaningful personal relationships with their students. This differs greatly from the

impersonal relations between teachers and students as illustrated in Sizer's (1992) and Cusick's (1973) descriptions of traditional high schools where short classes and great numbers of students prevent meaningful relationships and personal attention between students and teachers. Again, it can probably be concluded that the focus of relationships at the Brass Apple Military Academy was on the student-teacher interactions. Students were close to one another but this seemed to be a result of the living situation and military groups, not the interactions within the classrooms.

When we consider Homans' idea that interaction denotes the process in which one unit of activity stimulates a unit of activity in another person, and we look at the data gathered at the Brass Apple Military Academy we see that the activity of the teachers stimulates the activity of the students. This is the most frequent set of interactions in the data collected at the school. There were far more interactions between teachers and students in classrooms than any other interactions between people. Administrators had few interactions with teachers, in fact they generally only had frequent interactions if the teacher was considered a problem. Few activities were structured for teachers to work with one another on academic affairs so these interactions too were limited. Therefore Homans' theory which states "when the frequency of interaction between two or more persons increases, the degree of liking for one another will increase, and vice versa," helps us explain why teachers and students, and students and students were so close. These two groups have the most opportunities for interactions. Homans' category "sentiments" refer to actions that signal the internal psychological states of people engaged in activities and interaction. These are the ties that form between students and the teachers, and the students themselves in their dorms and military units. The limited activities and interactions of the administration with the teachers and the teachers with each other has resulted then, in limited positive sentiments.

Teachers were able to keep students interested in learning and successful in their endeavors to learn under the single subject plan. Homans' theory of motivation can help explain this success. Students' actions (their will to study, write papers, make presentations, do research, or any learning activity) will be the result of whether they value the activity and whether they think they can do the activity successfully. In short; action = value X probability of success. Students were able to concentrate on their learning activities, teachers were able to have in depth discussions and tailor instruction to the needs of the students, students had time to do the assignments, and finally students could get all the help from their teachers that they needed to be successful. These were a result of the structure of the school which allowed for small, long classes.

Conclusion

Intensive education, by its very nature, restructures the teaching/learning process, the student-student relationships, student-teacher relationships and could also affect the teacher-teacher and teacher administrator relationships. The Brass Apple Military Academy is an organization that is structured in a way that optimizes the teaching and learning process. The physical conditions, resources, and student-to-teacher interactions all readily support the work of the school. The workplace of a classroom where instruction and learning are maximized consists of extended time and increased interactions. Good physical conditions and resources other than time are necessary, but, the time and increased opportunities for interaction variables are the most important factors that affect the work of teachers and students. This school represents the ideal instructional situation. It is ideal because the administration has allowed the intensive education schedule to be in place.

The extended time allotted for classes contributes to increased interaction between teachers and students. This increased interaction between teachers and students leads to positive sentiments between the two. The positive sentiments between the teachers and students leads to student success in class work. Students are willing to work hard at learning and teachers have time to give the individual attention that is needed. The positive sentiments between teachers and students lead to student success and the attribution of student success to teacher effect. When teachers see their students learning they experience job satisfaction.

The increased interaction that was caused by the duration, frequency, and intensity of the classes in the single subject study plan allowed teachers to have much influence on the students. It also allowed for increased opportunities for students' individual expression resulting in positive emotional involvement and development.

Provisions at the Brass Apple Military Academy for adult interaction were not so clearly structured and intense. The organization's provisions for the enlightenment and enrichment of the students through interaction and allotment of time is evident. Teachers, on the other hand, were provided with materials (magazines and current teaching materials) and opportunities to attend university classes in order to improve themselves, but had few structured opportunities to work together. Students improve through interaction and educators improve through sources other than the educators in the Brass Apple Military Academy itself. The adults at the school were not working together on improving the teaching, they were working alone in this area. The teaching norm of autonomy probably plays a large role in this situation, though studies have shown that teacher collaboration, if structured correctly does not affect teacher autonomy though it can help teachers improve their teaching which in turn improves their job satisfaction.

The work of the school lies in the relationships between the students and the teachers and the activities, interactions and sentiments between students and teachers. Other schools would give much to have the kinds of relationships between teachers and students that the Brass Apple Military Academy has developed. In fact I, as an educator, found it hard not to stay and work at the academy. Both the students and educators were most grateful for the conditions of teaching and learning that were created from the single subject schedule. They did not continually mention the number of books available, the beautiful grounds, the library, or even the computers. The most important thing to educators and students alike seemed to be the provision of enough time to teach and learn in small classes which allowed for plenty of teacher/student interaction. The single subject plan, which allowed for these small, intimate classes, and concentrated attention, enhanced the real work of the school—the teaching and learning process.

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Appendix A

Teacher and Administrator Questions

1. What do you think of the intensive education schedule?

2. Does it affect your teaching methods?

3. Is learning affected?

4. What are student-teacher relations like? Teacher-teacher relations, and student-student relations?

5. Do you learn the students' strengths and weaknesses and does this affect your teaching?

6. You mentioned class size was a benefit of this kind of scheduling are there any other benefits or problems?

Student Questions:

1. What do you think of the one subject plan?

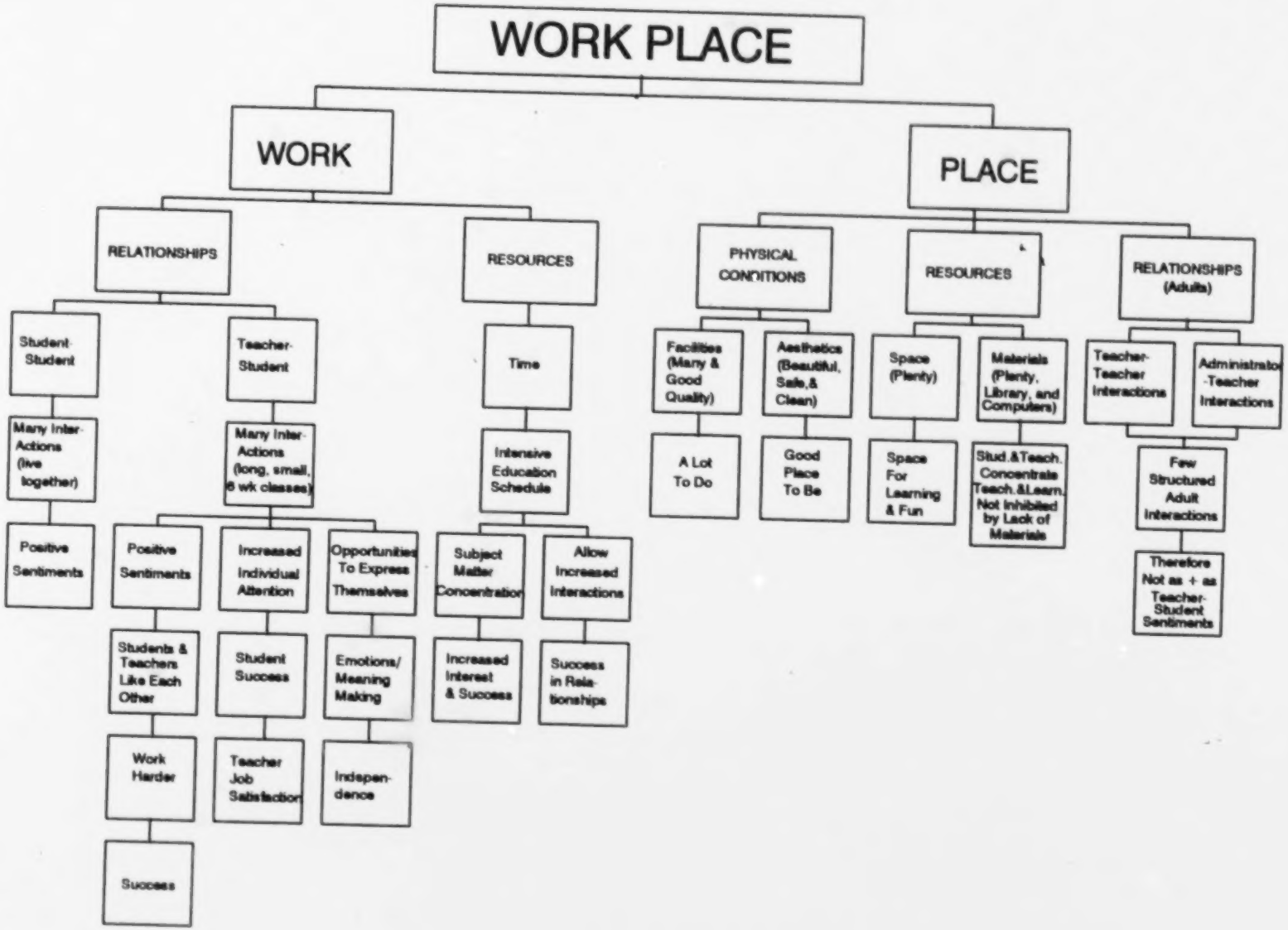
2. What is your favorite class to study? (best one?) Why?

3. Are you close to your teachers? Explain.

4. Do you get bored in the one subject plan - or interested - Why?

5. What makes a good teacher? A bad teacher?

6. Do you do a variety of things in your classes? Have a variety of activities?



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